

ABSTRACTS

THE EAR

Paracusis. V. O. KNUDSON and I. H. JONES. (*Laryngoscope*,
Vol. xxxvi., No. 9.)

By paracusis is meant the ability of certain individuals suffering from deafness, to hear better in the presence of a noise. The question has been raised as to whether these persons actually do hear better in a noise. Experimental work was carried out to determine the point. In a series of 187 consecutive cases of deafness, 73 were purely of the perceptive type, 58 were mixed perceptive and conductive, and 56 were purely of the conductive type. None of the perceptive cases exhibited paracusis. Of the mixed cases, 15 exhibited paracusis, whereas in 56 conductive cases, 26 had paracusis. The phenomenon appears to be associated with conductive impairment.

Three individuals with normal hearing, ten with paracusis, and two of the perceptive type were selected for special study. The problem was investigated by two methods:—(1) Determining the effect of noise upon the hearing acuity of pure tones. (2) Determining the effect of noise upon the hearing of speech sounds. A special apparatus was constructed for producing a typical noise by which the ear heard a continuous variation of frequency between zero and 20,000. The variation occurs in one-fifteenth of a second and because of the rapidity of variation all tonal property is lost and a noise which embraces the whole range of hearing is the result. It might be called a "blanket" noise.

It is found that noise decreases the hearing acuity of a normal individual, a perceptive and also a paracusic, and this was found to apply to pure tones as well as to the hearing of conversation. The greater the noise, the less the hearing. The noise, however, is not so disturbing to the paracusic as to all other individuals. This is explained by the fact that paracusics do not hear well below 512 d.v. Although noise is made up of frequencies through the whole audible range, yet a considerable portion of the energy of the noise lies in the frequency range below 512 d.v. The lower tones, in other words, have a much greater masking effect than the higher tones. As the paracusic does not hear the low tones well, there is not so much masking effect on his hearing as there is in a normal or perceptive. In this way, he enjoys an advantage. If the noise is so loud that conversation has to be maintained by excessive loudness of speech, the paracusic gains, because the loudness of the conversation introduces a distortion for the normal, but not for the paracusic.

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Incidentally, persons with perceptive deafness claim that they hear less well in a noise than in quiet, and observations show that this claim is confirmed. Since perceptives have good acuity for low tones, they experience the full masking effect of the low tones in a noise.

The paracusic enjoys an additional advantage in conversing with a normal or perceptive, because the normal always speaks louder in the presence of a noise. On the other hand, the paracusic does not speak loudly. The paracusic gets the benefit of the lower speech of the normal, whereas the latter is attempting to hear the much feebler intonation of the paracusic.

The conclusions are (1) the paracusic does not hear better in the presence of a noise. He hears well in the presence of a slight noise, and his hearing is more and more interfered with as the loudness of the noise increases. All individuals hear better in quiet than in a noise. (2) The paracusic has a relative advantage over the normal or perceptive in the presence of a noise.

The writers give the views of others who have studied and written on paracusis, whether they believe in it or not. The audiometer charts of the various experiments are published, and the experiments are described in detail. A few of the results of articulation tests are also charted.

There is a complete bibliography.

ANDREW CAMPBELL.

Vertigo. F. HOLT DIGGLE. (*Practitioner*, August 1927.)

The recent work on the otolith apparatus has helped to elucidate some of those cases of disturbed equilibrium which did not present a complete picture of disorder of the mechanism of the semicircular canals. Labyrinth disturbances associated with an inflammatory middle-ear condition may be a simple irritative condition possible of relief by paracentesis of the drumhead, or an indication of an actual spread of suppuration to the labyrinth. Vertigo may also be caused by impacted cerumen, by Eustachian catarrh, by violent nose-blowing, or by exposure to loud or shrill noises. Increased pressure in the labyrinthine fluid has been looked upon as a cause of vertigo, and treatment has been directed towards relieving it by lumbar puncture (Quix) and by opening the lateral semicircular canal (Mollison). Apoplexy of the labyrinth as assumed by Ménière is probably very rare. The writer has not found the blood pressure as a rule high. He thinks that atheromatous changes in the labyrinthine vessels and toxic neuritis explain many of the cases presenting Ménière's symptom complex. Every case of vertigo is due to disturbance in some part of the vestibular tract, and it is now possible by making use of the different tests and reactions to locate the lesion.

T. RITCHIE RODGER.

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The Routes of Propagation of Inflammatory Processes from the Middle Ear to the Apex of the Petrous Bone, Cavernous Sinus, Sixth Nerve and Gasserian Ganglion. L. PIETRANTONI. (*Arch. Ital. di Otol.*, May 1927, Vol. xxxviii., No. 5, p. 296.)

In discussing the etiology of isolated cavernous sinus thrombosis of otitic origin, that is, where it is not merely an extension of lateral sinus thrombosis, the author formulates four hypotheses. The first is that the infection spreads as a phlebitis of the venous plexus surrounding the internal carotid artery. Infection may pass into this plexus from the minute vessels of the middle ear. Pus has been observed several times in the carotid canal. The second possible route is along the inferior petrosal sinus. The exact way in which infection reaches the inferior petrosal sinus has been imperfectly understood, but, in cases in which the pathology has been studied, thrombosis of the latter has been the most common condition present. The third route is by phlebitis of the superior petrosal sinus which becomes infected through some small veins which drain directly into it from the tympanum. The fourth mode of infection is a direct spread from an osteitis of the tip of the petrous bone.

Pietrantonì's original work is a study of a series of petrous bones injected with Chinese ink from the jugular vein and then decalcified and cut in serial sections. By this means he was able to trace out the course of the minute venous channels. One of the most important of these was a group of vessels draining the tympanic cavity and running in the bone medially and a little upwards and backwards to join the inferior petrosal sinus. They are independent of the internal auditory veins.

With reference to the vascular connections with the abducent nerve and Gasserian ganglion between the tympanic cavity and the tip of the petrous, the author has observed a plexus of small veins continuous with those of the tympanum of which a posterior group opens into the inferior petrosal sinus just before it joins the cavernous sinus. A middle group anastomoses with the pericarotid venous plexus, while an anterior group after joining the network round the Gasserian ganglion and abducent nerve enters the cavernous sinus directly. The abducent nerve is shown in his plates surrounded by these small vessels and in close relationship to the inferior petrosal sinus. The presence of these vessels provides an explanation for the occurrence of Gradenigo's syndrome. The author thinks that the milder cases of the syndrome are probably caused by venous congestion at the tip of the petrous, while the more severe cases are probably associated with a cellular petrous tip with osteitis and abscess formation.

After studying the reports in the literature of primary thrombosis of the cavernous sinus, Pietrantonì noted that where the pathological

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changes had been accurately described, the anterior part of the inferior petrosal sinus was usually given as the route of infection of the cavernous sinus. The explanation generally given was that this in turn was infected through the internal auditory vein, in spite of the fact that no labyrinthine symptoms were noted. Pietrantonio's work showing the presence of numerous small vessels running from the tympanum into the inferior petrosal sinus and cavernous sinus offers a satisfactory explanation of the clinical facts and constitutes a valuable addition to otology.

J. K. M. DICKIE.

Temporary Œdema of the Eyelids accompanying Orogenic Serous Meningitis. HELMUTH RICHTER. (*Munch. Med. Wochenschrift*, No. 41, Jahr 74.)

Richter describes the case of a child of four who displayed well-marked œdema of the eyelids, and other symptoms suggestive of intracranial infection, some three months after the Schwartze operation had been carried out for an acute mastoiditis. The wound was re-opened and some unhealthy granulations removed from the wall of the sigmoid sinus which upon aspiration was found to contain fluid blood.

A specimen of spinal fluid removed by lumbar puncture displayed all the characteristics of serous meningitis, the lid œdema immediately subsided and recovery ensued. The author concludes that œdema of the lids in cases of intracranial infection should not necessarily limit the diagnosis to that of cavernous sinus thrombosis.

J. B. HORGAN.

Meningococcal Neurolabyrinthitis. P. RIGAUD. (*Annales des Maladies de l'Oreille, du Larynx, du Nez et du Pharynx*, July 1927.)

The meningococcus is a pathological agent which very often attacks the auditory nerve and the labyrinth. The history of the disease has been chiefly confined to the work of the clinicians and for the most part neglected by the aurists, and this in spite of the fact that deafness had been considered, as early as the beginning of the nineteenth century, a complication of extreme frequency in cases of cerebrospinal meningitis.

In the future there still remains the need of a closer co-operation between the specialist and the practitioner to elucidate the problem of deafness of this nature and its origin.

The view is now generally accepted that the meningococcal infection may spread from the nasal fossæ viâ the cribriform plate of the ethmoid to the meninges and thence to the labyrinth viâ the acoustic nerve, or again viâ the Eustachian tube and middle ear. In other cases a hæmatogenous infection may occur and the infection become localised in the neurolabyrinth, affecting this in part or wholly.

In discussing the pathology of lesions of the auditory nerve and its

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sheath it is shown that, apart from a definite infection of the neuro-meninges by the meningococcus, a compression effect alone may result from the increased intracranial pressure of cerebrospinal fluid, and that this may determine the recurrence of labyrinthine troubles during the convalescence of patients from an attack of cerebrospinal meningitis. On the other hand, the labyrinthine lesions are shown for the most part to take place by a propagation of the meningeal infection along the pia-arachnoid sheath of the acoustic nerve.

However other modes of attack, viz., via the aqueducts of the cochlea and the vestibule, or from a meningococcal otitis media through the labyrinthine wall of the tympanum, or by direct hæmatogenous infection in the course of a meningococcal septicæmia, must be kept in mind.

The writer fully discusses the pathological anatomy of the acute and subacute or cicatricial lesions, the symptomatology of the various clinical forms, e.g., fulminating, relapsing, benign, and ambulatory, the course and prognosis of the disease, and the diagnosis by clinical and laboratory methods.

In the differential diagnosis attention must be given to the simple meningitis with labyrinthitis of otitic origin, and to the labyrinthitis of mumps and syphilis.

Serum therapy is at present the only efficacious form of treatment, and good results in curing deafness may result if instituted early in the course of the disease.

An extensive bibliography is appended.

L. GRAHAM BROWN.

The Frequency of Death from Aural Disease. LUDWIG HAYMANN.
(*Münch. Med. Wochenschrift*, Nr. 33, Jahr 74.)

Haymann's statistics are compiled from the post-mortem investigations carried out at the Pathological Institute of the University of Munich, the Municipal Hospitals of Munich, and the Allerheiligen Hospital in Breslau from the years 1910-1921, the war years excluded.

The percentage of deaths from otogenic intracranial complications in approximately 10,000 deaths was 0.56. As regards the frequency of individual complications, the statistics showed that in half the cases (54 per cent.) only one complication was present, in about a third (34 per cent.) two were present, whilst in about a sixth (11 per cent.) there were three or more present. Of those cases with only one complication, meningitis was found to predominate (66 cases); deaths from sinus thrombosis alone were second in frequency (30 cases), whilst the cases of brain abscess alone were least often met with (9 cases). Considered altogether, meningitis was also found to predominate as a complication (146 times); this is followed by sinus thrombosis

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(99 times) and brain abscess (60 times). The predominance of meningitis, both alone and in combination with other complications, is contrary to the clinical experience of Haymann as it has been of other writers. If considered from the view-point of etiology, sinus thrombosis was found to occupy first place, as it was found in its pure and combined forms on 99 occasions, whilst the combined (with brain abscess) and pure forms of meningitis occurred in 86 cases.

Analysing further, it was found that amongst 60 cases of brain abscess there were 31 cases with sinus thrombosis (22 of which had a simultaneous meningitis) and 42 with meningitis. Amongst 146 cases of meningitis there occurred 60 cases with thrombosis (22 of which had a simultaneous brain abscess) and 20 which were complicated by brain abscess alone. It is pointed out that these facts should be borne in mind by those who rightly maintain that the early elimination of the causative factor is the most essential and hopeful manner of combating infective meningitis, and that this factor may be, and often is, other than an infected labyrinth. It is also pointed out that the discovery of a brain abscess does not entitle the surgeon to forget the possibility of a co-existing sinus thrombosis or vice versâ. Intracranial complications were found to predominate in the male sex, due, the author thinks, to occupational injuries.

The site of the ear disease was in the Munich investigations found to be most often on the right side, whilst in the case of those carried out at Breslau the lesions of the left ear predominated. In the author's operative statistics as well as in those of several other authorities left-sided ear lesions were found to predominate. The diagnostic significance of this fact, if established, becomes evident in cases of complicated double-sided ear disease.

Haymann's statistics confirm the findings of Blau and Körner that the highest rate of mortality from complicated ear disease (meningitis, sinus thrombosis, and brain abscess) occurs between the ages of eleven and forty years.

In this valuable and painstaking statistical record which is accompanied by several analytical tables, the author compares his own results with those obtained by other German and English writers.

J. B. HORGAN.

THE NOSE AND ACCESSORY SINUSES.

Nasal Disease in relation to Asthma. SIR JAMES DUNDAS-GRANT.
(*Practitioner*, December 1927.)

The essential feature of asthma is a narrowing of the bronchioles produced by contraction of the bronchial muscle. Dixon's experiments proved that this can be produced by stimulation of the peripheral end of a cut vagus nerve. On the other hand, if the thoracic end of a

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cut cervical sympathetic is excited, immediate and profound dilatation occurs. Dixon found that contraction of the bronchioles could be induced by irritation of the nasal mucosa especially on the upper and posterior part of the septum. On the strength of this observation, Sir James has studied particularly in asthmatic cases the condition of the turbinated body and neighbouring structures in their relation to the upper and posterior part of the septum. In 1913 he published the results of treatment of 53 cases, and now gives some details of another similar number recently occurring in hospital and private work. In both series, recovery or marked improvement was found in over 80 per cent. He emphasises the point that it is not sufficient merely to remove some piece of the middle turbinal; care must be taken not to leave any part of it in contact with the septum. If there is a septal spur in that region requiring resection, care must be taken that the correction does not leave contact between the septum and the turbinal of the other side. Several operations may be required as it is always wise not to err on the side of too free removal. In cases of cystic enlargement of the middle turbinal it is sometimes possible to do a submucous removal of the medial half of the bony cyst and conserve the mucosa.

T. RITCHIE RODGER.

The Relationship of Acute and Chronic Paranasal Sinus Disease to Systemic Conditions in Infants and Young Children. A. J. CONE.
(*Laryngoscope*, Vol. xxxvii., No. 1.)

A series of 71 cases of children suffering from various diseases is analysed from the point of view of a causal sinusitis. Aspiration of the maxillary sinus was performed in 56 cases. In 41, an intranasal operation was done on the antra. In the remaining 15, 10 per cent. argyrol was instilled and tonsils and adenoids removed. There were 7 cases of arthritis; the results of treatment and surgery were good in this group. Paranasal sinus disease was diagnosed in 6 cases of cholera infantum. Four responded to treatment and 2 died. There were 7 cases of bronchiectasis and X-ray showed blurring of the maxillary sinuses in each case. Two of these cases required weekly sinus treatment. In 3 cases of nephritis, 2 had chronic maxillary suppurative sinusitis, while the third had pansinusitis. *Staphylococcus albus* was obtained in 2 cases. Five cases of pyelitis with nasal sinus disease improved. When pyelitis is present, there is frequently an upper respiratory infection and the pyelitis fails to improve until the upper respiratory condition is treated. Definite improvement followed treatment in 5 cases of asthma. Two had maxillary involvement alone, 2 had maxillary, ethmoid and sphenoid involved, while 1 had

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a pansinusitis. In 9 malnutrition cases, sinus disease was found, but it was not settled which was the primary condition. All improved with nasal treatment. Five eczema cases improved while treatment was kept up. Two cases of headache were relieved permanently, 1 by operative treatment of the sinuses. Two cases of chronic ulcerative colitis with a history of upper respiratory infection were investigated. In 1 case, all forms of medical treatment failed; tonsils and adenoids were diseased and there was paranasal sinus disease. Treatment was refused. The second case was operated on but left the hospital in two weeks with no marked improvement being noted.

ANDREW CAMPBELL.

Local Anæsthesia in External Operations on the Nasal Accessory Sinuses. W. L. SIMPSON. (*Laryngoscope*, Vol. xxxvii., No. 4.)

The subject of the paper considers chiefly the operation on the frontal, ethmoid, and sphenoid air-cells. In all patients as preliminary preparation, $\frac{1}{4}$ grain of morphin sulphate and $\frac{1}{200}$ grain of hyoscin hydrobromide are given in 2 c.c. of 25 per cent. magnesium sulphate one and a half hours before operation, and again $\frac{1}{8}$ grain of morphin sulphate fifteen minutes before the patient leaves for the operating theatre. The patient is placed in a darkened room two hours before operation and is asked to keep his eyes closed. When the stretcher arrives, the patient is lifted on to it and a towel is placed over the eyes. The same precautions are taken to lift the patient on to the operating table. The inside of the nose is swabbed with a mixture of adrenalin solution, 1 in 1000, one part, and 4 per cent. cocain hydrobromide, two parts. Next, the side to be operated on is packed with gauze soaked in the above solution. Twenty c.c. of novocain solution with twelve drops of adrenalin, 1 in 1000, are used for the injection. Special attention is paid to injection in the region of the supraorbital nerve and the lacrymal sac. The line of the proposed incision is injected. In six to eight minutes the incision may be made. There is surprisingly little bleeding. Very few patients feel pain while the frontal sinus is cleaned out, but if any pain is felt, packing with cocain-adrenalin solution will stop it. "Work a bit and then pack and the pain will be nil." The time of operation is less than when general anæsthesia is employed, while the control of bleeding is a joy to the surgeon.

In acute suppuration of the frontal sinus, the anæsthesia is usually not so complete. Forty-eight operations on the frontal sinus have been done under general anæsthesia and forty-six under local. The authors now rarely find it necessary to recommend an operation under general anæsthesia.

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Three Cases of Ethmoid Disease. W. BROADBENT. (*Lancet*, 1927, Vol. ii., p. 866.)

The author describes two cases of children aged 7 and one man aged 25. In the first, a girl, the onset of fatal symptoms, headache, vomiting, and delirium, was unattended by any nasal signs. Death occurred on the sixth day from meningitis following right ethmoid empyema. The second child, a boy, was admitted with right proptosis of a week's duration. No nasal discharge: Incision on the upper and inner side disclosed pus over the ethmoid; the periosteum was raised and the pus-filled ethmoid sinus emptied. The boy recovered. The adult had suffered from recurrent headache. His throat became infected from a patient in the next bed, the headache became worse, the neck rigid, and swelling appeared in the right temporal and preauricular region. This was followed by oedema of the eyelids. No nasal discharge. The autopsy disclosed purulent sinusitis in the sphenoid and ethmoid and streptococcal meningitis.

MACLEOD YEARSLEY.

The Intranasal Ethmoid and Frontal Sinus Operation. Technique. Report of Cases. W. SPIELBERG. (*Laryngoscope*, Vol. xxxvii., No. 2.)

The intranasal operations of Halle, with slight modifications, are described in detail with illustrations.

The most important and essential features in this operation are the preservation of the entire middle turbinate body, while the ethmoid labyrinth can be eradicated and the floor of the frontal sinus resected under direct vision. It may be necessary to resect the nasal septum in order to make room for the middle turbinate. It is interesting to note that out of eighty deaths from meningitis following operation on the ethmoid in only two cases were the middle turbinates untouched.

Under local anæsthesia, the middle turbinate is deflected against the nasal septum by means of a Killian speculum. This gives a good view of the middle meatus. Two incisions are made into the ethmoidal cells, one immediately below the attachment of the middle turbinate, the other about a quarter of an inch below and parallel to the first. The ethmoid is now opened and the cells included or entered by the two incisions are removed. The entire labyrinth may be thus removed and the sphenoids drained. In order to expose the uppermost, anterior, and preturbinal area, a mucoperiosteal flap is turned down with its base posteriorly, so that it lies on the inferior turbinate. A satisfactory view of the upper and outer bony nasal wall is obtained. With curettes these cells are exenterated. It is sometimes necessary to chisel away the agger nasi, but if the frontal sinus requires drainage, this is always done and the opening into the frontal sinus can be clearly seen and probed. The floor of the sinus is removed, working from behind forwards with

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curettes or Halle's pear-shaped electric burr. The mucosa lining the frontal sinus can now be curetted. Finally the mucoperiosteal flap is replaced and held in position by gauze packing, while the middle turbinate slips back into position. Daily irrigation of the frontal sinus and the passage of sounds so as to keep the frontal sinus patent, form part of the post-operative treatment.

Twenty cases are reported, eleven in which the antra and ethmoids only were operated on, and nine where the intranasal frontal sinus operation was performed, together with the other sinuses involved. There is a series of pre- and post-operative X-ray pictures of all the frontal sinus cases operated upon.

After a careful examination of these cases, the author feels that this method is the best available. No case should be operated on by the external route till this method has been tried.

A further report of these cases will follow after a longer post-operative period, but the results as reported are very encouraging indeed. Among the advantages claimed are—(a) it preserves the middle turbinate; (b) injury to the cribriform plate, anterior cranial fossa and olfactory nerve filaments is practically impossible; (c) long drawn out post-operative treatment and scarring is avoided; (d) it is at times difficult to tell post-operatively whether or not operation has been performed, because of so little damage; (e) it opens up a route to the frontal sinus, giving sufficient drainage without risk.

ANDREW CAMPBELL.

PERORAL ENDOSCOPY.

"The Laryngoscope"—*Bronchoscopic Issue*, Vol. xxxvi., No. 3.

The whole of the number is devoted to Bronchoscopy and Oesophagoscopy, and commences with a *history of these subjects* by Dr Ellen J. Patterson. The purpose of the author's paper is a presentation of data since the introduction of direct methods of examination. The evolution of endoscopy is described step by step, and finally the results according to Jackson's statistics show that about 98 per cent. of localisable, aspirated foreign bodies in the bronchi can be removed by peroral bronchoscopy. Bronchoscopy for the diagnosis and treatment of pulmonary mischief of other than foreign body origin has made such enormous strides in recent years that it seems essential for every large hospital to have a bronchoscopic clinic. A bibliography of the most important articles that have appeared since 1914, is appended. The literature prior to that date was listed in the two books by Chevalier Jackson.

Dr M. C. Myerson describes a *method of obtaining a direct view of the upper lobe bronchus*. A Jackson bronchoscope is fitted

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with a sliding rod and spatula, which is manipulated so as to raise the upper wall of the main bronchus, and this brings the distal wall of the upper lobe bronchus into view. The sliding spatula is slowly pushed out and this has the effect of bringing the bronchus to a more or less horizontal position. This procedure exposes the upper lobe bronchus in its entirety. Dr Yankauer had also used a device for the same purpose, several months before the writer practised his method.

Dr H. P. Mosher, while writing of "*Exostoses of the Cervical Vertebrae as a cause of difficulty in swallowing*," maintains that he has discovered that the pig has a pharyngeal pouch which appears below the thyroid and cricoid half of the constrictor. There is a closure of the pouch by muscles leading from the pharynx posteriorly to the pouch. Exostoses of the cervical vertebrae occur in patients with an arthritic history. One patient, aged 74, showed by X-ray two short spurs on the bodies of the fifth and sixth cervical vertebrae. Another case was that of a young woman with exostoses of the bodies of the sixth and seventh cervical vertebrae. She complained of obstruction to swallowing.

Dr H. B. Orton writes on "*Traumatic Perforation of the Oesophagus*," and describes a case of a child of Mongolian type who swallowed a needle with thread attached. His little brother, seeing the thread hanging from the mouth, pulled on it. This caused the perforation of the oesophagus, while the needle assumed a horizontal position, because the eye of the needle was apparently more distal than the point. There were symptoms of mediastinitis before removal of the foreign body. Post-mortem showed an acute encephalitis, perforation of the oesophagus, pus in the mediastinum. The intestines contained two large pearl buttons, six burned matches, an 8-inch piece of corset cord, a 2-inch piece of red cloth, small pieces of straw, and a short length of twine. There was also a 5-inch round worm.

The author describes next a case of "*Anterior dislocation of the Atlas as a cause of inability to swallow solid foods*." This patient, aged 4, had difficulty in swallowing for about three years. There had been some difficulty at birth, and the child had not been able to hold his head up till he was about seven or eight months old. X-ray was taken with the idea of locating a possible foreign body. Barium passed quickly into the stomach, showing no obstruction. The X-ray, however, showed an anterior dislocation of the atlas. A tongue depressor introduced into the mouth became hooked beneath the body of the atlas.

Dr H. H. Forbes reported "*A case of Emphysema of the Neck and Chest (pre-operative) following inhalation of a piece of a nut*." A bronchoscopy was performed and bits of nut removed. A stormy ten days followed, but the child recovered. There was probably a

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rupture of a pulmonary vesicle with subsequent leakage into the mediastinum and tissues of the neck.

Dr M. C. Myerson's notes on "*Obscure Chest conditions with positive Bronchoscopic findings*", including two cases of Syphilis of the Trachea and Bronchi" are full of interest:—

Case 1 gave a history of primary luetic lesion two years previously, the present complaint being of asthmatic attacks. On the anterior wall of the right main bronchus, about 15 mm. from the trachea, a mucous plaque was demonstrated. Anti-luetic treatment cured the asthma completely.

Case 2 had a primary lesion fourteen years ago. The symptoms were frequent cough and blood-stained sputum. Bronchoscopically, on the anterior wall of the right main bronchus was found an irregular swelling, dark red in appearance, about 1.5 cm. by 5 mm., with two white areas of ulceration, about 3 mm. in diameter. In the left main bronchus, there was a small ulcer surrounded by an erythematous zone. The diagnosis was gumma of the bronchi with commencing ulceration. Antispecific treatment improved him considerably.

Case 3 complained of dyspnoea, cough, expectoration, and hæmoptysis. There was no loss of weight and no rise in temperature, but a sense of constraint in the lower chest was his main complaint. Physical examination revealed a total absence of breath sounds over both lower lobes. Purulent fluid was aspirated from the right pleural cavity. Wassermann reaction was negative. Bronchoscopically, the posterior branch of the right lower lobe bronchus was occluded by a jelly-like tumefaction of the mucous membrane. The anterior branch was free. On the left side, a similar total obstruction of the lower lobe branch was observed. On applying adrenalin solution, tumefaction disappeared in the primary branches, but a similar image was seen in the branches beyond. This would indicate that all the branches of the left and right lower lobe bronchi posteriorly were similarly involved. The chest was again aspirated, and sterile pus obtained from both pleural cavities. On the left side, the needle encountered a stiff resistant wall and a definite scratching sound was elicited. There was calcification of the pleuræ and empyema on both sides. The bronchoscopic picture is rare and sufficiently positive and definite to warrant its being recorded.

Case 4 was diagnosed as asthma, possibly neoplasm of the mediastinum, aneurysm, and tuberculosis. Bronchoscopy showed a cauliflower mass protruding from the superior wall of the left main bronchus. A piece removed was reported on as squamous-celled carcinoma of one of the upper lobe bronchial branches. The diagnosis, which had been in considerable doubt, was immediately cleared up by bronchoscopy.

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Dr C. J. Imperatori reports a "*Foreign Body introduced trans-pleurally and removed viâ Bronchus three years later.*" His patient had a thoracotomy done with rib resection. A drainage tube with gauze packing was introduced. The wound drained for a year and then healed. Two years later the patient coughed and expectorated two to four ounces daily of a very foul-smelling sputum. Once the sputum showed several threads of gauze. A bronchoscopy revealed a small nipple-like foreign body in the first ventral branch of the left lower lobe bronchus. The gauze packing, which was eight inches long, originally must have been pushed into the pulmonary tissue and gradually migrated to the bronchus.

The next case by the same writer is that of "*Foreign Body removed from the Bronchus after being in situ over three years.*" A radiograph, taken at a tuberculosis clinic, revealed the presence of a large bar-pin in the right bronchus. There had been no history of aspiration. The bronchoscope showed a stricture of the right bronchus, immediately below the upper lobe bronchus. In appearance the stricture was like the os uteri. After dilating with a Jackson bronchial dilator, the bar safety-pin was seen with its point and head proximally. With the aid of a Tucker tack-forceps, the pin was successfully closed and withdrawn through the bronchoscope. Recovery was uneventful.

Dr F. O. Lewis emphasises the importance of passing a bronchoscope on cases which would otherwise be difficult to tracheotomise, because of swollen glands in the neck or cellulitis. He cites the case of a child of five months with cervical adenitis, large suppurating incisions on the side of the neck, and a large firm swelling in the region of the thyroid gland. The tissues of the neck were œdematous and swollen. The passage of the bronchoscope relieved the immediate distress, while a large quantity of thick secretion was removed from the trachea. With the instrument in position, an otherwise hazardous tracheotomy was rendered an orderly proceeding. The same method may be employed in cases which demand tracheotomy for malignant glands, enlarged thymus, or extremely large thyroids.

Dr L. H. Clerf presents a number of cases of "*Foreign Bodies in the Tracheo-bronchial Tree: Report of cases in which Bronchoscopy was not done.*" A number of cases which coughed up foreign bodies such as pins, dental reamer, tooth fillings, peanuts, soft food, are described. Some of the cases had retained the foreign body for a number of months; in one case, a timothy head had sojourned in the lung for six years and was coughed up shortly after admission to hospital. Gravity favours the retention of a foreign body unless the patient is inverted, an exceedingly dangerous procedure, because of the possibility of an alteration in position causing obstruction or spasm due to its effort to pass through the glottis where it may lodge. The

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expectorating mechanism in children is highly inefficient as compared with adults. Foreign bodies of high specific gravity are rarely expectorated in adults and practically never in children. Objects of low specific gravity are occasionally expelled in adults and in children, while coughing up of those with an intermediate specific gravity is exceedingly remote. According to Jackson, 2 to 3 per cent. of foreign bodies are coughed up. The author warns those who may wait in the hope that the foreign body may be coughed up. Owing to the configuration of the tracheo-bronchial tree, the force of gravity, the influence of inspiration, inflammation, and other considerations, the foreign body has very little chance of being spontaneously expelled. Nevertheless, the cases reported show that some patients are fortunate in expelling their foreign bodies. How many have died in the effort of spontaneous expulsion, it is impossible to estimate, but one reads of these tragedies in the papers. There is a bibliography.

Doctors H. H. Bowing and P. P. Vinson describe a method of "*Surgical Diathermy for tumours of the Trachea.*" Such tumours are usually malignant, and treatment is of course palliative. Heat is generated in the tissues by the resistance produced by the passage of a high-frequency bipolar current of sufficient intensity to destroy the neoplasm. The current is of the d'Arsonval type, with a relatively low voltage and high amperage. In the case recorded, a large soft tumour, sessile and firmly attached to the right and posterior walls of the trachea immediately above the carina, was present. Diathermy seemed to be the only logical treatment as before long the tumour would completely obstruct the trachea. The active electrode was a piece of music wire 42 cm. long, gauge No. 23, partially insulated by a rubber tube with an outside diameter of 3.33 mm., and the wall 0.8 mm. thick. The indifferent electrode was applied to the thigh. The point of the electrode was inserted into the centre of the tumour and as soon as the rhythm of the respiratory movement was determined, thus insuring against accidental contact between electrode and bronchoscope, the current was turned off and on by the assistant. About 30 to 40 per cent. of the tumour was coagulated at the first operation. In nine days the tumour was reduced 50 per cent. in size, but a second diathermy was not performed till six months after, when the tumour was only a quarter of its original size. Radium was applied to the sternum over the site of the lesion. This tumour was apparently of slow growth, and a piece removed only showed inflammatory fibrous tissue, though it appeared to be malignant. The authors believe that surgical diathermy has a place in the treatment of neoplasms in the areas revealed by the bronchoscope. Perfect high-frequency currents should be employed, as they generate regularly and are well balanced.

The whole Bronchoscopic issue is particularly interesting and will well repay reading in the original.

ANDREW CAMPBELL.

Peroral Endoscopy

The Problem of Tracheobronchoscopy and Œsophagoscopy.

TARO MATSUI (Japan). (*Laryngoscope*, Vol. xxxvi., No. 2.)

Notes of eight interesting cases of foreign body in the trachea and bronchi are given, while the œsophagus is responsible for twenty-three cases.

The second part of the article deals with spontaneous tracheal bleeding. Two cases are reported where small blood-vessels were observed on the anterior wall of the trachea, three or four rings above the carina. In each case, cauterising with trichloroacetic acid cured the condition. The symptoms were those of hæmoptysis.

The author concludes by describing three cases of difficult decanulisation after diphtheria. They were diagnosed by tracheoscopy as caused by an excess of granulations near the tracheotomy wound. Removal of granulations effected a cure.

An interesting papilloma of the trachea immediately above the carina was also cured by removal of the growth. The main symptoms were cough and blood-stained sputum. The growth was as large as a bean and innocent.

ANDREW CAMPBELL.

Direct Endoscopy of the Air and Food Passages; Investigations as to the Topography of the Mouth and Throat in regard to this.

F. HASLINGER (Vienna). (*Zeitschrift für Hals-, Nasen-, und Ohrenheilkunde*, Band xix., Heft 1.)

Mainly by means of Röntgen examinations Haslinger arrived at, or at least confirmed, some important conclusions. Thus (with the patient seated), bending the head backwards without simultaneous dorsiflexion of the cervical spine, and even with simultaneous dorsiflexion, is very unsuitable for direct laryngoscopy, and other endoscopic procedures. The most favourable position, as others have also found, is maximal bending-back of the head with simultaneous forward inclination of the cervical spine. With the patient sitting on a chair without a back, this is best achieved by an assistant who, standing behind, fixes with his elbows the upper part of the patient's body, pushes the chin forwards and upwards with his left hand and presses vigorously with his right one on the forehead in a backward and somewhat downward direction. With the patient lying with the head and neck hanging freely beyond the end of the table, the assistant stands on the left of the head, and with his right hand under the occiput raises it above the level of the table. The cervical spine is thus bent forwards. With the left elbow pressing lightly on the chest, the left hand below the chin pushes the head backwards. A head-rest which can be raised or lowered (on a sliding quadrant, fixed as required by means of a screw) may be used when a prolonged exploration has to be made.

JAMES DUNDAS-GRANT.

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THE ŒSOPHAGUS.

Congenital Stenosis of the Œsophagus and Foreign Bodies in the Canal.

J. GUISEZ. (*Bulletin d'Oto-Rhino-Laryngologie*, May 1927.)

Congenital stenosis of the œsophagus is a rare condition, the writer having met with it in only 6 cases out of a total 3000 œsophagoscopies.

As in cases of cicatricial or inflammatory stenosis, foreign bodies may in the above congenital variety bring about complete dysphagia when œsophagoscopy becomes a matter of urgency, and when in most cases the exact nature of the stenosis can only then be determined.

Its appearance is indeed characteristic. Generally in the neighbourhood of the cardia there is a kind of valve, more or less inflamed, modified by areas of œsophagitis, but the free border of its opening kept sharp and easily recognisable. Above this is seen a fairly large dilatation, which, however, never reaches the great dimensions due to a so-called idiopathic stenosis.

These congenital strictures, moreover, cannot easily be confused with those due to simple spasm where the orifice is wrinkled and strongly closed, nor with inflammatory stenosis where there is no valvular appearance, nor with stenosis due to compression of the œsophageal wall by an external tumour when the lumen takes a semilunar or crescentic form.

Treatment consists in œsophagoscopy and dilating the stricture with bougies after preliminary incision of the valvular folds with a triangular-shaped blade; or by the method of circular electrolysis. The author prefers the latter, which he concludes gives the more lasting results.

L. GRAHAM BROWN.

Foreign Bodies in the Œsophagus. H. KAJI (Japan). (*Kumamoto Igakukai Zasshi*, August 1926.)

This writer gives interesting statistical data from 53 cases personally observed. They are grouped as follows:—

1. Age of patients—

First decade	9.7 per cent.	Fourth decade	24.5 per cent.
Second „	9.7 „	Fifth „	20.8 „
Third „	20.8 „	Sixth „	7.3 „

2. Sex of patients—

Male	64 per cent.	Female	36 per cent.
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3. Vocation of patients—

Peasants	45 per cent.	Clerks	7 per cent.
Shopkeepers	13 „	Students	3 „
Labourers	11 „	Others	21 „

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4. Nature of foreign body—
Fish-bones . 73.6 per cent. Artificial teeth . 7.3 per cent.
Other foreign bodies . . . 11.3 per cent.
5. Foreign body swallowed—
During eating . 83 per cent. During play . 9.10 per cent.
At other times 7 per cent.
6. Time foreign body remained in cesophagus varied from ten minutes to seven days.
7. Duration of healing—In all cases after removal of foreign body, healing was complete within a week.

DOUGLAS GUTHRIE.

REVIEWS OF BOOKS

The Infancy of Medicine: an Enquiry into the Influence of Folk-Lore upon the Evolution of Scientific Medicine. DAN MCKENZIE, M.D., F.S.A. London: Macmillan & Co. 1927. Price 15s.

A work from the pen of Dr Dan McKenzie is always welcome, and in the present volume he reveals another side of his varied activity. The subject of folk-beliefs in relation to medicine has attracted a good deal of attention in recent years and the publication of this book is evidence of the prominent place it is beginning to assume. Serious study of magical beliefs and practices undertaken in the spirit of scientific enquiry has presented them from a new angle and they can no longer be regarded as old wives' tales and dismissed as unworthy of consideration. They represent beliefs which go far back in the evolution of the human race and have a wide distribution, and though usually associated with untutored and savage minds, some of the lowest folk-practices and beliefs are extremely persistent even among civilised peoples. The practitioner meets them in his daily work and in all classes of society, and he sees the mediæval practice of reciting a *lorica* against the perils of a journey surviving in the mascot on a motor-car that is driven by a member of a learned profession like his own.

Into this group of beliefs representing an independent facet of the history of medicine Dr McKenzie has pushed his enquiry, and we are grateful to him for a clear and well-ordered presentation as well as an interesting study of primitive psychology.

The book opens with an excellent account of the evolution of the medical man, in which the outlines of the history of medicine are sketched. Two chapters discuss primitive pathology and primitive